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09/513,489	02/25/2000	Aravind Sitaraman	CISCO-1818	7304

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EXAMINER

AVELLINO, JOSEPH E

ART UNIT	PAPER NUMBER
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2143

DATE MAILED: 10/06/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/513,489

Applicant(s)

SITARAMAN ET AL.

Examiner

Joseph E. Avellino

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 12 July 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-5, 9, 13, 21-29, 45-48 and 50-71 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5, 9, 13, 21-29, 45-48 and 50-71 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

1. Claims 1-5, 9, 13, 21-29, and 45-48, 50-71 are pending in this examination. The Office acknowledges the addition of claims 68-71.

### ***Claim Rejections - 35 USC § 102***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1, 2, 5, 13, 21, 25, 26, 45, 49, 51, 53-56, 58-61, and 63-71 are rejected under 35 U.S.C. 102(b) as being anticipated by Perkins (USPN 5,159,592).

2. Referring to claim 1, Perkins discloses a network access server (NAS) providing a connection to a user in a data communications network, said NAS being capable of communicating with a home gateway server (HGS), said NAS comprising:

an HGS identifier (pseudo-network number) identifying an HGS to which the request for an IP address is to be transmitted (col. 8, lines 45-68).

an IP address requester for requesting an IP address from the HGS (global Gateway or GW) on behalf of a user, without using a tunneling protocol, the HGS maintaining a pool of IP addresses for allocation to authorized users associated with the NAS (local Gateway or GW) (e.g. abstract; Figures 2-5; col. 5, lines 50-65);

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an IP address relay for receiving an IP address allocated to the user from the HGS and for relaying the allocated IP address to the user (mobile unit) (e.g. abstract; Figures 2-5; col. 5, lines 50-65); and

a memory coupled with said IP address requester and said IP address relay, said memory storing association between an identification of the user and the IP address allocated to the user (col. 5, lines 15-27).

3. Referring to claim 2, Perkins discloses a detector for periodically detecting connection of the user to the NAS, said detector updating the association in said memory to indicate that the allocated IP address is no longer in use if the connection of the user is lost (col. 5, lines 27-49).

4. Referring to claim 5, Perkins discloses the HGS (global gateway) identifier is responsive to log-in information (i.e. serial number, or other identifying data provided by the mobile unit, since it is inherent that if there are multiple global gateways, there must be some distinguishing identifier provided by the mobile unit in order for the local gateway to determine which global gateway to forward the IP request) provided by the user (col. 8, lines 45-67).

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5. Referring to claim 13, Perkins discloses a generator, responsive to the receipt of a disconnection request from the user (mobile unit), for generating and sending a notice

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to the HGS (global gateway) that the user is no longer connected to the NAS (local gateway) (col. 6, line 59 to col. 7, line 2).

6. Claims 21, 25, 26, 45, 49, 54-56, 58-61, and 63 are rejected for similar reasons as stated above.

7. Referring to claims 51, and 53 Perkins discloses said IP address requester transmits the user's authentication information to the HGS with the request for an IP address (col. 5, line 50 to col. 6, line 20).

8. Referring to claims 64-67, Perkins discloses the global communications internetwork is the Internet (remote users spread over a wide geographic area) (col. 4, lines 21-38).

9. Referring to claims 68-71, Perkins discloses the user (i.e. mobile unit) belongs to the home domain (col. 8, lines 55-65).

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***Claim Rejections - 35 USC § 103***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

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10. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 3, 9, 23, 28, 47, 57, and 62 are rejected under 35 U.S.C. 103(a) as being unpatentable over Perkins in view of Holt et al. (USPN 6,070,192) (hereinafter Holt).

11. Referring to claims 3, 23, 28, 29 and 47, Perkins discloses a NAS as stated in the claims above. Perkins does not disclose providing a receiver for receiving periodic queries about the connection of the user to the NAS and a responder to inform the HGS about the connection. Holt discloses a receiver for receiving periodic queries from the Network Controller (NC) about the status of the user connection to the NAS (col. 12, line 64 to col. 13, line 14); and

a responder responsive to said periodic queries for informing the NC that the user is still connected to the NAS (col. 12, line 64 to col. 13, line 14).

Holt does not disclose informing the HGS that the user is still connected, however the system of Holt could be obviously modified to incorporate the NC as part of

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the HGS, therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the system of Holt to reduce the overall complexity of the system and reducing overall network traffic.

12. Referring to claims 9, 57, and 62, Perkins discloses a NAS as stated in the claims above. Perkins does not disclose the HGS identifier is responsive to call information associated with the incoming line. Holt discloses an HGS identifier responsive to call information associated with the incoming line used by the user to access the NAS for identifying an HGS to which to forward the user's request for an IP address (col. 11, lines 1-7). It would be obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaching of Perkins with Holt to allow load balancing techniques such that bottlenecks are not realized at gateways as supported by Holt (col. 4, lines 45-50).

13. Referring to claim 52, Perkins in view of Holt disclose the NAS as stated in the claims above. Perkins in view of Holt do not disclose that the IP address requester uses RADIUS, however it is suggested by the prior art that it would have been obvious to incorporate RADIUS into the combined system of Perkins and Holt to provide for reduced complexity of the system while allowing for the ease of future upgrades or replacements.

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Claims 4, 24, and 48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Perkins in view of Holt as applied to the claims listed above, and further in view of Inuoe et al. (USPN 6,442,616) (hereinafter Inuoe).

14. Referring to claims 4, 24, and 48 Perkins in view of Holt discloses a Network Access Server (NAS) as stated in the claims above. Perkins in view of Holt does not disclose the NAS comprising a receiver for receiving periodic signals from the user and a forwarder responsive to said receiver for forwarding information to the HGS that the user is still connected to the NAS. Inuoe discloses:

a receiver for receiving periodic signals from the user (col. 15, lines 21-24); and  
a forwarder (home router) responsive to said receiver for forwarding information to the HGS that the user is still connected to the NAS (col. 15, lines 25-26).

It would be obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaching of Perkins and Holt with Inuoe to efficiently monitor the connections in the network while reducing the complexity of the monitoring components.

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Claims 22, 27, 46, and 50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Perkins in view of Holt as applied to the claims above, and further in view of Reid et al. (USPN 6, 233, 616) (hereinafter Reid).



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15. Referring to claims 22, 27, 46, and 50, Perkins in view of Holt disclose a NAS as stated in the claims above. Perkins in view of Holt do not disclose detecting a connection with the user and sending periodic keep-alive messages associated with the user to the HGS as long as the continuing connection with the user is detected. Reid discloses detecting a connection with the user and sending periodic keep-alive messages associated with the user to the HGS as long as the continuing connection with the user is detected (col. 2, lines 54-61; col. 4, lines 39-46). It would be obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaching of Reid with Perkins and Holt to efficiently determine if the user is connected to the system, efficiently reducing complexity of messages transmitted between components.

***Response to Amendment***

16. Applicant's arguments filed July 12, 2004 have been fully considered but are not persuasive.

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17. In the remarks, Applicant argues, in substance, that (1) Perkins does not teach an HGS identifier for identifying an HGS associated with the home domain.

18. As to point (1), the term "home domain" as it is taken in the art, can be interpreted as, "a subset of a population." Perkins discloses that in the Multiple

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interactive global Gateways embodiment (col. 8, lines 45-67), that each global gateway 18 is associated with a different "pseudo-network" number, which can correctly identify and distinguish a home HGS from a plurality of HGS servers (col. 8, lines 57-60).

Perkins furthermore discloses that "if each global gateway has separate pseudo-networks, then IP routing will automatically send IP packets to the correct global gateway *that is primarily responsible for a mobile unit*" (col. 8, lines 62-65, emphasis added). This feature will correctly identify the home domain for the mobile unit. By this rationale, the rejection is maintained.

### ***Conclusion***

19. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph E. Avellino whose telephone number is (703) 305-7855. The examiner can normally be reached on Monday-Friday 7:00-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David A. Wiley can be reached on (703) 308-5221. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9306 for regular communications and (703) 872-9306 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

JEA  
September 27, 2004

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